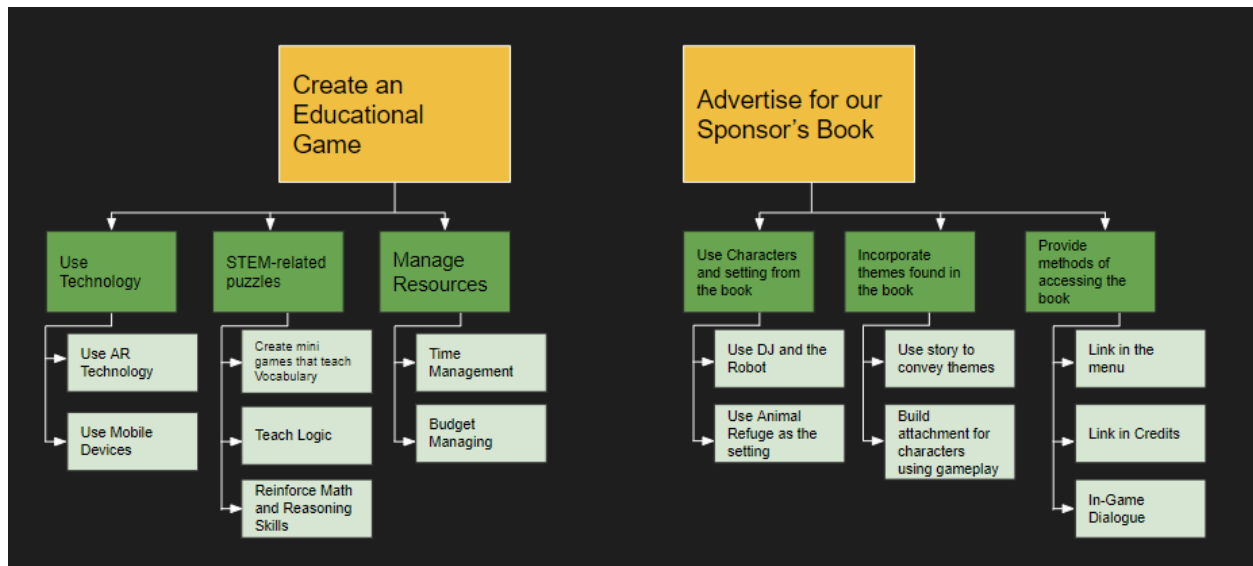


XR Game Development: Team Echo
James Evans
Devin Ryan
Scott Swiatek
March 16, 2021

Assignment 3

1. User Stories and tasks



- a. Epic 1: Create an Educational Game
 - i. Use Technology
 1. Use Mobile Devices
 - a. Priority Score: Medium
 - b. The game must be portable to mobile devices
 2. Use AR Technology
 - a. Priority Score: Low
 - b. The game must a feature that uses the device's camera/location/etc.
 - c. If(ARCompatible){Use Camera;}
 - ii. STEM-related puzzles
 1. Teach Vocabulary
 - a. Priority Score: Medium
 - b. Some of the puzzles must introduce and test/challenge the players knowledge on certain vocabulary
 2. Reinforce Math and Reasoning Skills
 - a. Priority Score: Medium

- b. Some of the puzzles must test/challenge the players math and reasoning skills
 - 3. Teach Logic
 - a. Priority Score: Medium
 - b. Some of the puzzles must have solutions that require the use of logic to complete
 - iii. Manage Resources
 - 1. Time Management
 - a. Priority Score: High
 - b. The players must manage their time wisely in order to complete the maximum amount of puzzles and minigames, using their time well
 - c. While(Day){CountdownClock = ShiftEnd - CurrentTime; CurrentTime++;}
 - 2. Budget Managing
 - a. Priority Score: High
 - b. The players must earn, save, and use funds for the refuge wisely in order to keep the refuge running well, expand its layout, and further upgrade its components
 - c. Funds = Funds + Earnings - Costs;
- b. Epic 2: Advertise for our Sponsor's Book
 - i. Use Characters and setting from the book
 - 1. Use Animal Refuge as the setting
 - a. Priority Score: High
 - b. The game must use an animal refuge as the setting, which was a prominent location in the book
 - c. Use AnimalRefuge.ResourcePack.Setting;
 - 2. Use DJ the Kitten and Default the Robot
 - a. Priority Score: High
 - b. The game must use DJ and Default as playable characters
 - c. If(DJ){Use DJ.characterModel;}Else{Use Default.characterModel;}
 - ii. Incorporate themes found in the book
 - 1. Build attachment for characters using gameplay
 - a. Priority Score: High
 - b. Portray the characters' individual personalities through gameplay and dialogue, developing a personal connection between the user and characters
 - 2. Use story to convey themes
 - a. Priority Score: Medium
 - b. Portray themes of the book into the gameplay and character dialogue
 - iii. Provide methods of accessing the book
 - 1. Link in the menu
 - a. Priority Score: Medium

- b. Provide a link in either the main menu or pause menu that connects to the book
 - c. `OnClick{Load URL;}`
- 2. In-Game Dialogue
 - a. Priority Score: Low
 - b. Use in-game dialogue to reference the book and praise it
- 3. Link in Credits
 - a. Priority Score: Low
 - b. Provide a link in the Credits of the game that connects to the book
 - c. Text = URL;

Tests:

Finished Tests:

1. Tested responsiveness of implemented CharacterController script in conjunction with NavMesh surface and NavMesh Agent. This test was done by adding the CharacterController script to a stand-in character model, assigning the Main Camera and Character object to the Cam and Agent property slots respectively, and then clicking on the NavMesh surface to see if the Character object moved to the correct location.

Current Tests:

1. Testing UI to make sure it looks good.
2. Testing Visual placement of objects to make sure they make sense.
3. Testing Minigame UI to make sure it works.
4. Testing FundTracker script.

Test Results:

1. By clicking on the NavMesh surface, the Character object will move to the spot that was clicked on. The Character object will enter the buildings through the doorways and will not walk through walls. If the user clicks the NavMesh surface a second time before the Character model has reached the location of the first click, the Character model will stop moving towards the first click location and start moving towards the second click location.
2. Finalizing the designs of the main menu and upgrade UI to be the most pleasant to use and easiest to implement into the product.
3. Currently working through the pseudo code to make sure it is logically sound. In the meantime, a basic UI has been created to

test the code, and is so far working (though not much code has been implemented).

4. A new file is created and data related to the currentFunds, totalFunds, and historicFunds variables are being stored in the file. Have not succeeded in loading the stored data back to the FundTracker object.